

CLAIMS

What is claimed is:

- 5 1. A method for indicating that an electronic device is operating in a selected mode, wherein the electronic device comprises at least one hand operatively coupled to an actuation mechanism, the method comprising the steps of:
- (a) moving the hand from a first position to a second position, wherein the movement of the hand is through a predetermined sweep angle;
- 10 (b) moving the hand from the second position back to the first position through the predetermined sweep angle; and
- (c) repeating at least step (a) and if necessary, repeating step (b), wherein the hand oscillates between the first position and the second position while the electronic device is operating in the selected mode;
- 15 (d) calibrating the hand so that the second position becomes a new first position;
- (e) moving the hand from the new first position to a new second position, wherein the movement of the hand is through a predetermined sweep angle;
- (f) moving the hand from the new second position back to the new first position through the predetermined sweep angle; and
- 20 (g) repeating at least step (e) and if necessary, repeating step (f), wherein the hand oscillates between the new first position and the new second position while the electronic device is operating in the selected mode.
- 25 2. The method as claimed in claim 1, wherein the hand repeatedly sweeps through an arc that is less than $\pi/2$ radians.
3. A method for indicating that a wearable electronic device is operating in a selectable mode selected from a plurality of modes, wherein the electronic device comprises at least one hand operatively coupled to an actuation mechanism, and when in the selectable mode, the method comprising the steps of:
- 30 (a) moving the hand from a first position to a second position, wherein the movement of the hand is through a predetermined sweep angle;

(b) moving the hand from the second position back to the first position through the predetermined sweep angle; and

(c) repeating at least step (a) and if necessary, repeating step (b);

wherein the hand oscillates between the first position and the second position while
5 the electronic device is operating in the selected mode; and

wherein in a mode different from the selectable mode, steps (a)-(c) are not performed.

4. The method as claimed in claim 1, wherein the step of calibrating the hand so that
10 the second position becomes a new first position occurs after the passage of an interval period of time.

5. The method as claimed in claim 4, wherein the interval period of time is one (1)
minute.
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6. The method as claimed in claim 1, wherein the step of moving the hand from the new first position to a new second position occurs after the passage of an interval period of time.

20 7. The method as claimed in claim 4, wherein the step of moving the hand between the new first position and the new second position occurs at about every one second.

8. The method as claimed in claim 6, wherein the step of moving the hand from the new second position back to the new first position occurs after the passage of the interval
25 period of time.

9. The method as claimed in claim 8, wherein the interval period of time is .5 seconds.

30 10. The method as claimed in claim 1, wherein the hand oscillates between the first position and the second position at a predetermined oscillation rate.

11. The method as claimed in claim 1, wherein the electronic device comprises a dial

on which there are numerical indicating indicia, and the second position is greater in numerical value than the first position, the method comprising the steps of:

providing that if the selected mode is a countdown mode, then:

the numerical value associated with the first position is greater than

5 the numerical value associated with the second position; and

providing that if the selected mode is a count up mode, than:

the numerical value associated with the first position is less than the

numerical value associated with the second position.

10 12. The method as claimed in claim 1, comprising the steps of:

terminating the timer and moving the hand to the first position if the hand was previously positioned at the second position.

13. The method as claimed in claim 12, including the steps of:

15 determining that the electronic device is no longer operating in the selected mode;

and

parking the hand at the first position.

14. The method as claimed in claim 13, wherein the step of parking the hand at the first
20 position comprises the step of:

moving the hand from the second position back to the first position if the hand is not at the first position when the electronic device is determined to no longer be operating in the selected mode, or

25 maintaining the hand at the first position if the hand is at the first position when the electronic device is determined to no longer be operating in the selected mode.

15. The method as claimed in claim 1, wherein steps (b) and (c) occur without actuations of a pusher or a crown by a user.

30 16. An electronic device that is operable in a plurality of modes one of which is a selected mode, wherein the electronic device includes at least one indicating hand for indicating that the electronic device is operating in the selected mode, wherein the electronic device comprises:

a selector for selecting the selected mode;

a dial having a dial side and an actuation mechanism side; and the indicating hand is movable about an axis and positioned on the dial side of the dial;

a controller for controlling the frequency of oscillation of the one indicating hand;

5 an actuation mechanism, operatively coupled to the controller, for moving the indicating hand back and forth from a first position to a second position and from the second position back to the first position at the frequency, wherein the indicator hand oscillates between the first position and the second position while the electronic device is operating in the selected mode;

10 whereby the movement of the indicating hand indicates that the electronic device is operating in the selected mode.

17. The electronic device as claimed in claim 16, wherein the actuation mechanism comprises a stepper motor that itself comprises a rotor, the stepper motor operatively
15 coupled to the controller, for stepping in clockwise and counterclockwise directions in predefined increments while the electronic device is operating in the selected mode;

wherein the rotor of the stepper motor is operatively coupled to the at least one indicating hand, and wherein the rotation of the rotor causes the movement of the at least one indicating hand.

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18. The electronic device as claimed in claim 17, wherein the indicator hand has a gear train operatively coupled thereto, wherein the rotational activity generated by the rotor of the stepper motor is conveyed to the gear train which in turn causes the rotation of the indicating hand.

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19. The electronic device as claimed in claim 18, wherein the controller includes a motor hand control circuit and a central processing unit, and wherein the motor hand control circuit receives commands from the central processing unit regarding the number of increments and direction of rotation, and wherein the motor hand control circuit
30 generates pulsed and phased signals for moving the rotor of the stepper motor a desired amount and in a desired direction.

20. The electronic device as claimed in claim 16, comprising:

at least an hour hand and a minute hand for conveying time of day information; and
wherein the indicator hand rotates about an axis other than a center axis of the dial.

21. The electronic device as claimed in claim 16, wherein the electronic device is a
5 wristwatch.

22. The electronic device as claimed in claim 21, wherein the actuation mechanism for
rotating the at least one indicator hand is not mechanically coupled to the hour hand or
minute hand;
10 whereby the actuation mechanism can rotate the indicator hand independent of the
time of day.

23. The electronic device as claimed in claim 17, wherein the stepper motor is bi-
directional.
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